

TravelSax

The smallest and lightest portable electronic saxophone in the world



The company

Odisei Music is a Barcelona-based Spanish company, founded by Ramón Mañas, who currently serves as the CEO. The startup specializes in creating the **world's first 3D printed electronic and portable instruments**, with its flagship product being the TravelSax.

Challenge

Ramón faced the challenge of practicing the saxophone in tight spaces, causing discomfort to his roommates and neighbors.

- Ramón Mañas

So, he decided to found Odisei Music to create a portable electronic saxophone for disturbance-free practice.

Given the circumstances, Ramón teamed up with IAM3DHUB to **optimize TravelSax prototypes for efficient production**, aiming to empower musicians and enhance music accessibility.



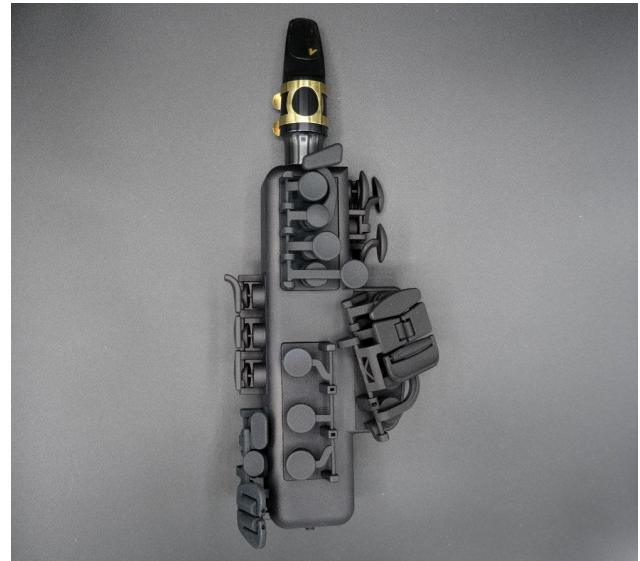
Solution

From its initial design, the saxophone underwent an extensive **redesign process**, simplifying its complex **subsystems** and mechanisms.

This involved a **reduction in the number of keys** and the incorporation of innovative modules, which **eliminated the need for standard mechanical parts**.

The main objective of this redesign was to improve the manufacturing efficiency of the saxophones. By reducing the number of keys and mechanisms, both the production and maintenance of these instruments were simplified.

Additionally, the integration of the air intake system and condensate removal channels **optimized manufacturing efficiency** and **minimized component requirements**.



3D Printer

 HP MJF 5200

Post-Processings

 Abrast - Sandblasting

 Abrast - Tumbling

Material

 HP - PA 12

Software

 Materialise - Magics



AM Benefits

The use of additive manufacturing empowered Odisei Music to achieve several key advantages in the **prototyping, development, and production** of the TravelSax. This technology made it effortless to design and produce prototypes, resulting in **reduced manufacturing costs** and a **shorter time-to-market**.

Additionally, 3D printing offered the flexibility to **produce the TravelSax on demand**, facilitating the creation of a digital spare parts inventory, thereby enhancing **production efficiency** and **optimizing the supply chain**.

Furthermore, the **freedom of design** allowed for the creation of a compact, lightweight instrument with exceptional performance quality.



Results

The impact of this collaboration with Odisei Music was a success. With more than **1,800 TravelSax** units delivered in over **40 countries**, this instrument has taken the saxophone community by storm. Musicians now have the freedom to practice and play anytime, anywhere without disturbing others, thanks to this new concept.



Ramón Mañas (Odisei Music CEO)



TravelSax Initial Prototype